

WORKKEYS: THE LANGUAGE FOR BUILDING A CAREER DEVELOPMENT SYSTEM

Michigan Department of Career Development

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Table of Contents

Acknowledgements.....	ii
Introduction.....	1
Michigan’s Career Development System.....	1
What is WorkKeys?.....	3
Benefits of WorkKeys.....	3
Role of WorkKeys in Building Michigan’s Career Development System.....	3
Measuring the Skills Gap: Statewide Measure of System Effectiveness.....	5
Statewide Implementation.....	6
Overview	7
WorkKeys Service Centers.....	7
Job Profilers	8
Implementation Statistics for 2000 – 2002.	9
Activities of WorkKeys Service Centers.....	9
ACT Assessment Centers.....	10
Using WorkKeys to Certify Career Readiness.....	10
High School Career-Technical Preparation.....	10
Entry/Exit to Postsecondary Technical Training Programs.....	12
Entry/Exit Option for Adult Education Programs.....	15
Entry/Exit to <i>Fast Break</i> , a Work/College Readiness Program, and <i>Fast Break Futures</i>	15
Entry/Exit Option for Workforce Development Programs.....	16
Entry/Exit Option for Rehabilitation Services Programs.....	17
The Michigan Career Readiness Certificate.....	18
WorkKeys Option for Earning the Michigan Merit Award.....	19
Financial Incentives for Improved WorkKeys Scores by Gear-Up Participants	19
Using WorkKeys to Build Curricula Aligned with Employer Needs.....	20
World Instructional Design System (WIDS).....	20
Competency-Based Curriculum Grants	22
Recent Initiatives And Future Directions	23
Michigan Department of Education Adopts WorkKeys to Assess Paraprofessionals	23
Foundation Skills for Michigan’s Manufacturing Workforce	24
Including WorkKeys Levels in Career Guidance/Awareness Tools	25
Conclusion	25

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MDCD is grateful to its many career development system partners at the local level who provided case study material for this document:

Michigan Career and Technical Institute
Wexford-Missaukee Area Career Technical Center
Saginaw Career Complex of the Saginaw Public Schools
Lenawee Intermediate School District
M-TEC, Oakland Community College
M-TEC, Kirtland Community College
Macomb Community College
Monroe Community College
Ottawa County Michigan Works! Community Action Agency

Finally, no discussion of WorkKeys in Michigan is complete without acknowledging the vision of MDCD's Director, Dr. Barbara Bolin, who immediately saw WorkKeys as the language of communication for the career development system. This monograph is testimony to her leadership in getting WorkKeys established in so short a time.

Introduction

A major initiative of the Michigan Department of Career Development (MDCD) has been to increase the utilization of WorkKeys as a language of communication between business and education. Developed by ACT, the WorkKeys system allows for occupational and job profiles, assessments to measure the current skill levels of workers, and specific training required to close the skills gap where one exists.

This monograph, produced and printed by the Michigan Department of Career Development, describes how MDCD and its local partners are deploying WorkKeys as an integral part of the career development system. It begins with a description of the system MDCD is building and the measures it has developed to assess the system's effectiveness in equipping workers with the skills required to maintain and enhance the Michigan economy. It describes how MDCD is deploying WorkKeys statewide through the 42 WorkKeys Service Centers that conduct job profiles for employers and assist agencies with assessments of workers' skills. Examples are provided of how various career development partners use WorkKeys to certify career readiness – high schools, career-technical education centers, community colleges, adult education programs, Michigan Works! Service Centers and their contracted service providers, rehabilitation services programs, and the demonstration programs, Operation Fast Break and GEAR UP.

Also described is how WorkKeys is used for earning the Michigan Career Readiness Certificate and the Michigan Merit Award college scholarship, and for building curricula that are aligned with employer needs. Finally, the monograph describes current and expected new initiatives to incorporate WorkKeys into the career development system. It describes how the Michigan Department of Education intends to use WorkKeys to certify the basic skills competence of paraprofessionals who assist teachers in the classroom. It describes a partnership with ACT and the Michigan Manufacturers Association to specify and close the skills gap for Michigan's manufacturing workforce. The monograph concludes with MDCD's intent to include WorkKeys levels in all career guidance and awareness tools, including the Web-based TalentFreeway.

Michigan's Career Development System

The state with the best workforce wins! Michigan is competing with other states and other nations worldwide. Having a high-quality workforce translates into attracting and keeping the best companies, which in turn translates into a better standard of living.

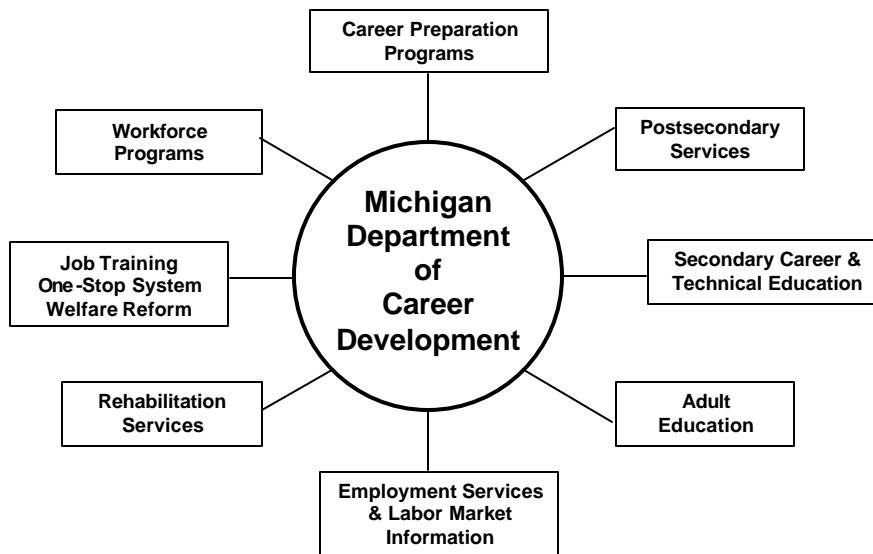
The success of Michigan in keeping its economy and workforce strong depends on its ability to forge a **system** using educational, economic development, and workforce development agencies and the private sector. All of these must work together to equip people with the proper skills, habits, and attitudes at all stages of life – *before* entering the workforce, *while* on the job, and *between* one job or career and another.

The mission of the Michigan Department of Career Development (MDCD) is *to continuously improve the Career Development System that produces a workforce with the*

required skills to maintain and enhance Michigan's economy. By housing all career-related activities in a single department, Michigan has created a dynamic state agency that has the authority *and* responsibility to:

- Provide career guidance and information to help people select or change their careers, as well as choose education and training services to equip them for their careers.
- Contribute to a solid foundation for Michigan residents in core subjects of reading, writing, mathematics, science, and social studies.
- Encourage students to excel in higher academics.
- Inform Michigan residents about the workplace and how to acquire academic and career skills through vehicles such as career academies, technical education centers and programs, cooperative education, apprenticeships, internships, career pathways, online learning, and community college instruction and training.
- Facilitate student and worker certifications based on demonstrated competencies and standards endorsed by employers.
- Provide labor exchange or placement services that help workers secure employment and employers recruit skilled workers.
- Upgrade the skills of the incumbent workforce.
- Continually assess students' progress towards moving to quality jobs or education.

Having these functions under a single umbrella allows MDCCD to channel the state-level resources toward the goals and objectives of local partners. Much of the work of the department is carried out through Michigan's system of 25 Workforce Development Boards (WDBs), which operate more than 100 one-stop career centers, as well as through schools, colleges and community organizations in the local service area.



What is WorkKeys?

WorkKeys is the language of communication for Michigan's career development system. Developed by ACT, formerly known as American College Testing, WorkKeys is a national system focused on those workplace skills that are used in a wide range of jobs, are teachable in a reasonable period of time, and can be defined for purposes of job analysis. WorkKeys provides a continuous structure for documenting and improving such skills.

Michigan uses WorkKeys throughout the system as a common metric of skill achievement that is credible with employers, workers, students, and educators. The simplicity of the system is compelling:

- **Current employees** define the skills needed to perform the work.
- **Employers** use these defined skills to identify potential workers and to assess incumbent workers who have the necessary skill levels.
- **Employees and students** can determine the skill levels they ought to have to enter careers and/or advance in their jobs, and can document that they have them.
- **Educators** can tailor instructional programs to help learners acquire the skills they need to meet employment levels.

Thus, WorkKeys is a job analysis, skills assessment, and training system that helps individuals, educators, and employers identify and close skill gaps in reading, math, writing, applied technology, listening, locating information, observation, and teamwork. Educators and business people have teamed with professional job analysts to develop a set of skill scales that accurately measure both the skills of individuals and the competency levels required for successful job performance. WorkKeys assessments are administered mainly through traditional, paper-based testing, but some assessments use audio or video tapes, and some incorporate computer-based assessments.

Benefits of WorkKeys

Employers who use WorkKeys to assess their incoming and current workforce typically achieve substantial benefits, including:

- Improved employee selection and advancement procedures
- Reduced turnover
- Decreased waste, or scrap
- Increased productivity
- Fewer legal challenges over hiring processes
- Higher employee morale

The Role of WorkKeys in Building Michigan's Career Development System

Michigan has embraced WorkKeys because of its credibility, simplicity, cost-effectiveness, ability to meet legal requirements, and ability to provide a foundation for a

full competency analysis profile that includes industry-specific technical skills and higher-order academic skills. This section describes these features and summarizes MD CD's strategy for deploying WorkKeys around the state.

A Credible System to Define and Measure Workplace Skills. To fulfill its mission and produce a workforce with the required skills, the department looks to WorkKeys as a way to define skills in terms acceptable to employers, educators, and workers alike. Credibility with employers is particularly essential as a "pull" factor. Students and workers will become more interested in taking the assessments and scoring well on them if they know that employers will use the scores to assist with hiring and promotion decisions.

Employers throughout the nation and Michigan accept WorkKeys because:

- Workers themselves verify the tasks that comprise their jobs and the skill levels they need to perform these tasks.
- When their own employees are the "subject matter experts" in conducting job task and skill analyses, employers have legal grounds to use the results to assist in employee selection and advancement decisions; that is, the resulting job profiles comply with legal requirements of the *Equal Employment Opportunities Act* and the *Americans with Disabilities Act*.
- The WorkKeys skill assessments are criterion-referenced and psychometrically sound, benefiting from years of research conducted by ACT on hundreds of test items. Thus, there is confidence that the assessments are valid, reliable, internally consistent, and free from cultural bias.
- All quality improvement systems such as ISO, Baldrige, and 6 Sigma require a valid measurement system such as WorkKeys to determine whether employee skill levels are adequate for their jobs and whether training results in improved skill levels.

Meets Legal Requirements. As stated earlier, the use of WorkKeys for job selection complies with legal requirements of the *Equal Employment Opportunities Act* and the *Americans with Disabilities Act*. In addition, federal legislation – including the *Workforce Investment Act* and the *Perkins Act of 1998* – has called on communities across the country to meet new standards for the delivery of workforce development services. One such standard is to document skills attainment, which providers can do very well with WorkKeys assessments.

Meets School Accreditation Requirements. Accreditation agencies such as the North Central Association require that districts document student achievement. Some Michigan school districts are using WorkKeys for this purpose.

A Credentialing System That Provides a Foundation For a Full Competency Analysis Profile. WorkKeys provides the basis for a portable skills credentialing system. For example, MD CD recently created the Michigan Career Readiness Certificate (MCRC) to document for employers that workers have the foundational skills needed for

success in most jobs. The MCRC provides the foundation for further credentialing, as proposed by a recent study by the Michigan Economic Development Corporation “to build a skill-based credentialing system to ensure quality and consistency to customers currently being served by community colleges and other organizations that comprise the career development system.” WorkKeys is a simple, cost-effective credentialing system that is already in place and can be built upon to include industry-specific and job-specific technical skills. When WorkKeys skills are combined with technical skills and higher academic skills, the result is a full “competency analysis profile” that can serve as the basis for developing an occupational training curriculum.

Strategy for Deploying WorkKeys Throughout the Career Development System

WorkKeys is a key ingredient in the development of Michigan’s career development system.

- MDCCD uses WorkKeys to measure the skills gap in Michigan. WorkKeys is one of the system performance measures the department uses at both the state and local levels.
- WorkKeys provides the basis for certifying the career readiness of various customers of the system, including the graduates of workforce training programs.
- WorkKeys is one of the assessment systems that can be used to earn the Michigan Merit Award.
- WorkKeys is used to help build training curricula that are aligned with employer skill requirements.
- WorkKeys provides the foundation for a more complete credentialing system that includes industry technical skills and higher-order academic skills.

These facets of how MDCCD is deploying WorkKeys around the state are described in the following sections.

Measuring The Skills Gap: Statewide Measure Of System Effectiveness

The gap between the skills that employers require and the ones workers have is one of the system success measures MDCCD produces annually to determine whether or not the career development system is improving. The indicator measures whether students and workers are improving their skills or falling behind. It uses ACT’s WorkKeys assessments as its basis and compares the scores of Michigan examinees to the ratings assigned to Michigan job profiles through job analysis. Four assessments comprise the index: Reading for Information, Applied Mathematics, Locating Information, and Writing. When job ratings exceed the average scores of all examinees, a “skills gap” exists. The index is computed by summing the job profile ratings for all four assessments and the scores of examinees for the four assessments. A ratio – profiles to examinees – is then computed.

Career Readiness Skills Gap Indicator

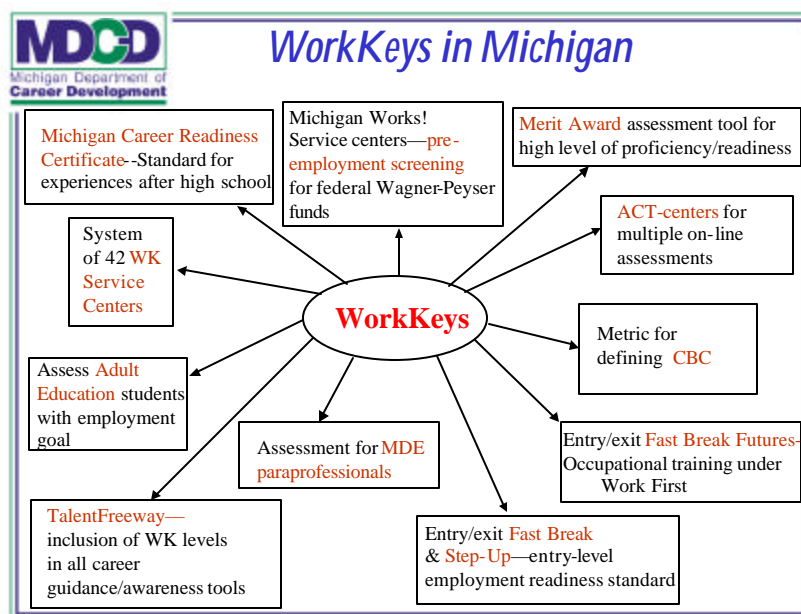
Measure	1999-2000	2000-2001
Examinee scores (Sum of 4 assessments)	13.9	14.0
Job profiles (Sum of 4 ratings)	15.8	15.8
Ratio – examinees to jobs	.88	.89

In its first year, the skills gap was 12 percent – that is, there was a 12 percent negative gap between the average of all job profile scores in Michigan and the average of all examinee scores. The skills gap closed by one percent between 2000 and 2001, that is, from 12 to 11 percent.

In addition to the state skills gap, ACT is providing information to calculate the skills gap in each of the state's 25 workforce regions. In this way, workforce regions can compare their skills gaps to the state as a whole.

Statewide Implementation

As the common metric in the state for identifying and communicating workforce skill, education and training requirements, the Department of Career Development incorporated the use of WorkKeys into many of its programs and activities. The following chart summarizes these efforts to deploy WorkKeys statewide.



Overview

To quickly deploy WorkKeys throughout the state, MDCE moved on several fronts simultaneously over a three-year period and:

- Created a network of several WorkKeys Service Centers throughout the state and provided training for their staff.
- Put into place policies to encourage or require the use of WorkKeys to certify the career readiness of participants in various programs overseen by the department, including workforce development, career-technical education, adult education, and occupational rehabilitation.
- Used WorkKeys as the primary assessment tool for various demonstration programs designed to help school youth, young adults, and welfare recipients get ready for work or college and become economically independent.
- Created funding incentives to develop technical education curricula that aligned with employer skill requirements as determined by WorkKeys job and/or occupational profiles.
- The board overseeing the Michigan Merit Award selected WorkKeys as the “workplace readiness assessment” prescribed by the Merit Award legislation.
- The Michigan Council on Technical Excellence created the WorkKeys-based *Michigan Career Readiness Certificate*, which signifies to employers that an individual has achieved acceptable levels in the foundation skills necessary for success in most entry-level jobs.
- The Michigan Department of Education selected WorkKeys to certify the basic skills competence of paraprofessionals who assist teachers in the classroom.

Following are descriptions of these initiatives, beginning with the establishment of WorkKeys Service Centers throughout Michigan.

WorkKeys Service Centers

The personnel in the WorkKeys Service Centers conduct job profiles for employers and assist agencies with assessments of workers’ skills. MDCE has established 42 WorkKeys Service Centers statewide. Participants include all 28 of Michigan’s community colleges, six intermediate school districts (ISDs), a private college, the Michigan Career-Technical Institute, and an assortment of community organizations and Michigan Works! Service Centers. All WorkKeys Service Centers tailor and deliver instructional services to employees and others to help them increase their levels of competence. The centers also maintain assessments in a secure environment, offer one-hour turnaround on assessment scores, and have access to an ACT-authorized job profiler.

Beginning in the summer of 2000, MD CD jump-started the establishment of these centers by providing \$15,000 grants to 34 of these centers – to all 28 community colleges and six intermediate school districts. The grants covered expenses typically incurred in the first year, including profiler training, the service center fee, and the purchase of a computer, printer, scanner, and SkillPro Site License.

In order to become a WorkKeys Service Center, institutions must meet the following ACT requirements:

1. At least one ACT-certified job profiler on staff with his or her own laptop computer, equipped with the necessary software and access to a portable printer
2. Ability to use Express Score to provide 60-minute turnaround scoring of assessments
3. Ability to administer and maintain secure assessments
4. Ability to provide instruction in one or more WorkKeys skill areas
5. A trained center administrator in the operation of a WorkKeys Service Center

In addition to these ACT requirements, MD CD required Service Centers in Michigan receiving start-up grants to send at least one representative to attend a series of first year professional development seminars on the following topics:

- Orientation – An overview of the WorkKeys system, its benefits to the community, and an explanation of the various assessments
- Sales – An interactive seminar designed to help the centers sell WorkKeys, including pricing strategies
- Marketing – An overview of the elements to successfully market WorkKeys
- EEO/ADA Compliance – An examination of the EEO and ADA issues associated with the use of WorkKeys
- Developing a Michigan Competency Analysis Profile (MCAP)– A discussion on how to develop a competency analysis for a given occupation that adds technical skills and higher academic skills to the WorkKeys skills

Job Profilers

Each WorkKeys Service Center has at least one ACT-certified job profiler who conducts job and occupational profiles for employers in its service area. Profilers work over a two-day period with subject matter experts (SMEs), who are job incumbents, to set WorkKeys levels.

Profilers receive training from ACT over a six-week period, with pre-work over the first five weeks of 10-20 hours per week. MDCD supplements the ACT profiler curriculum with the topics mentioned above, with special attention to federal regulations related to employment.

Because of the wide variety of uses of WorkKeys, profilers should have experience with job analysis, group facilitation, development and implementation of training programs for business and industry, and Windows-based computer software. These skills that make an individual a successful profiler are not the same skills that make a person successful as a salesperson. Thus, Michigan does not expect job profilers to be responsible for selling profiles to business customers. Instead, profilers are responsible for profiling and providing technical expertise about the WorkKeys system.

Implementation Statistics for 2000 – 2002

Michigan's network of WorkKeys Service Centers was implemented initially during the summer of 2000. Since then, the network has grown from 34 to 42 centers. Through July 2002, they have conducted 180 profiles and 35,000 assessments.

Approximately one-third of the centers took advantage of MDCD incentive grants to subsidize half the cost of 40 profiles. These grants appear to help increase employer interest in developing job profiles for their companies.

Activities of WorkKeys Service Centers

WorkKeys Service Centers are becoming increasingly entrepreneurial in selling their job profiling, assessment, and instructional services. For example:

- **Macomb Community College** is assessing all of the 10th graders of the L'Anse Creuse School District. It is providing instruction in WorkKeys skills to incumbent workers at the worksite of a manufacturing plant and is measuring learning from the pre-test to the post-test.
- **Monroe Community College** is using WorkKeys with a manufacturer of electronic components in Dundee, Michigan. They have profiled their Team Member position (60 entry level employees) with the help of a \$1,000 subsidy from MDCD. The company is paying the remaining \$2,000. With the results from this profile, MCC will be locating several computers at the facility with KeyTrain software installed on them. KeyTrain is an instructional software package that helps individuals improve their WorkKeys skills. A state Economic Development Job Training grant helps the company provide KeyTrain at the job site, thus enabling employees to access KeyTrain while at work .
- **Lenawee Intermediate School District** is about to use WorkKeys as a pre/post test for the career-technical education students attending the center. WorkKeys

will be one of the assessment tools used for the North Central Accreditation process.

Michigan's ACT Centers

In addition to the 42 WorkKeys Service Centers, Michigan also has seven ACT Centers. The nationwide network of ACT Centers delivers training and testing services to individuals, employers, and professional organizations. Located primarily at community and technical colleges, ACT Centers serve as a comprehensive resource for developing a community's workforce. ACT Centers offer skill-specific training through more than 1,000 computer-based and Web-based courses developed by leading courseware providers, workplace skill assessments, and computer-delivered certification and licensure tests for trades and professions. Michigan's ACT Centers are located at the following community colleges:

- Delta College
- Grand Rapids Community College
- Jackson Community College
- Macomb Community College
- Mott Community College
- Oakland Community College
- Wayne County Community College

Using WorkKeys To Certify Career Readiness

WorkKeys is used to certify the career readiness of high school career-technical education students, community college occupational education students, dislocated workers and other trainees in workforce development programs, and students in adult education and rehabilitation training programs.

High School Career-Technical Preparation

With encouragement from MD CD, several high schools and career-technical education centers throughout the state are using WorkKeys assessments as pre- and post-tests for students enrolled in career-technical preparation (CTE) programs. In this way, districts can determine the instructional needs of particular students, provide appropriate instructional interventions to enable them to meet business/industry standards, and provide them with a skills-based credential upon program completion or graduation.

The **Wexford-Missaukee Area Career Technical Center** in Cadillac, which receives students from eight public and three private school districts, uses WorkKeys as part of its school improvement process and transitions accreditation initiative with the North Central Association. For accreditation purposes, it is important to assess the learning progress of students and to document their academic and workforce readiness.

The Wexford-Missaukee Area Career Technical Center provides three WorkKeys assessments – Reading for Information, Applied Mathematics, and Locating Information – to all (approximately 325) students entering 14 occupational programs, normally in the fall of their junior year (11th grade). A fourth assessment, Applied Technology, is given to students entering four programs – Automotive Service, Robotics/Automation, Electronics, and Small Engines. Student scores are compared with the levels needed to enter the occupational field as determined by all of the WorkKeys job profiles that have been administered nationally. Students have opportunities to improve their scores with the assistance of learning software such as KeyTrain and/or paraprofessionals in the classroom. To assess learning progress, students are re-tested with the same assessments in the spring of their senior year. Program completers receive certificates that list all of their grades and competencies. WorkKeys exit scores are kept in each student's permanent record. In the future, scores will be listed on each student certificate. The Career Technical Center has also developed its own software to track and document all of this achievement information. The first two-year cycle was just completed in June 2002.

The **Saginaw Career Complex** has used WorkKeys for 10 years to assess students' skills in relation to the occupational fields they wish to enter and to measure their growth in these skills while enrolled in the center's 24 occupational programs. Approximately 900 juniors and seniors from different high schools are in the Complex three hours a day; all are assessed in Reading for Information and Applied Mathematics when they enter and exit an occupational program. Exiting seniors also take the Locating Information, Teamwork, and Writing assessments. Scores on these WorkKeys assessments help students earn two certificates: the Marketable Skills Certificate and the Michigan Career Readiness Certificate.

First, the Marketable Skills Certificate is awarded for documenting achievement of the following:

- 1) WorkKeys scores in Applied Mathematics, Reading for Information, Locating Information, Teamwork, and Writing that are at the levels required for success in the student's occupational field
- 2) "B" or above grade point average in career-technical courses
- 3) Attaining the center's Code of Cooperation
- 4) Maintaining a 95 percent attendance record in the program
- 5) Demonstrating safe work habits
- 6) Earning a high school diploma

Sixty-five percent of the Saginaw Career Complex students who completed their programs met the criteria for Marketable Skills certification in the 2001-02 school year.

Second, the Michigan Department of Career Development's Career Readiness Certificate is a highly sought-after credential by Career Complex students. Based on high-level achievement in Reading for Information, Locating Information, Applied

Mathematics, and Writing, this certificate lets employers know that Saginaw Career Complex students are academically prepared for the world of work. The 2001-02 school year was the first year that the certificate was awarded, and approximately 41 percent of the Saginaw Career Complex seniors were able to include this credential in their portfolios.

The Saginaw Career Complex also used WorkKeys assessments to help students prepare for subsequent testing leading to the coveted \$2,500 Michigan Merit Award, which is a merit-based scholarship for postsecondary education. In many programs, students had listed earning this scholarship as part of their class mission statement, and they followed through by establishing goals and measures for accomplishment including specific goals for the WorkKeys benchmark tests offered in reading and math. Students charted their progress from the WorkKeys pre-test given early in the first semester, practiced reading and math strategies in their programs, took benchmark or practice tests to gauge their progress, and targeted the Merit Award level as their primary aim. Better than one-third of the graduating seniors (35 percent), or 123 students, scored at high enough levels to qualify for the Michigan Merit Award using the awarded funds for postsecondary education.

Finally, the Saginaw Career Complex uses WorkKeys in a very conscious way to help integrate academic with technical skills in the 24 occupational programs. Two math and two language arts teachers work with the occupational instructors to develop integrated curricula and to see to it that students' WorkKeys scores continue to improve, particularly at-risk students whose scores are below what their occupational field requires.

Staff summarize the philosophy of the above efforts with the following statement:

Providing students with goals, measures, and processes to achieve success is the foundation of the Saginaw Career Complex School Quality Plan. WorkKeys assessments are one of the valuable tools we use to keep track of our progress because these tests can help students, parents, and employers gauge work readiness. By pre-testing all of our incoming students in reading and math, then assessing our seniors in the areas of Reading, Math, Locating Information, Teamwork, and Writing, we help students to understand how academic achievement ties into workplace success.

Entry/Exit to Postsecondary Technical Training Programs

A small yet growing number of Michigan community colleges, particularly the ones with a new Michigan Technical Education Center (M-TEC), are deploying WorkKeys to improve the career preparation of students. M-TECs focus exclusively on programs designed to meet the skill needs of employers. Some colleges and/or MTECs use the attainment of WorkKeys skill levels as prerequisites for entering their occupational programs. Others use WorkKeys for diagnostic purposes or to earn a certificate of competence in a technical field. Examples include the following:

Kirtland Community College's Technical Education Center (M-TEC) in Gaylord offers both certificate and Associate of Applied Science degree programs in seven occupational areas, or 14 programs in all. As the M-TEC is just getting started, most students are in the certificate programs. Upon earning their certification, they are qualified to work in their field or continue in the degree program. The M-TEC requires that all students take four WorkKeys assessments – Reading for Information, Writing, Applied Mathematics, and Locating Information – upon entering their occupational programs. Prior to completing their programs, they must repeat and pass only those tests showing their skills were not at the required levels. Following are details of how the M-TEC's assessment system works.

- All entering students take WorkKeys assessments to demonstrate their ability to be successful in college level work and to diagnose needs for additional training. Thus far, all certificate-seeking students have taken WorkKeys assessments. The required skill levels for all seven occupational areas are the same ones that are required to earn the Michigan Career Readiness Certificate (MCRC) -- Reading Level 5, Writing Level 3, Math Level 4, and Locating Information Level 4. The MCRC is a state initiative that is explained later in this document.
- At the completion of 15 credit hours of course work, students are reassessed using the PLATO assessment exams, which are closely aligned with WorkKeys. PLATO¹ was chosen as the intermediary examination because it is computerized and may be administered at any time, at no cost to the student. Results are instantaneous and students who demonstrate a deficiency in any core competency may utilize PLATO to progress through a self-directed, instructor-guided, student-centered tutorial designed to meet their specific needs.
- Students who did not reach the required WorkKeys levels when they entered the program must re-take and pass the required assessments before completing their programs. Those who do so will earn the Michigan Career Readiness Certificate. This qualification along with measures of technical competence result in certification for the occupational programs.

Kirtland's M-TEC has an active WorkKeys testing program with local high schools that helps smooth the transition from high school to college or work while getting students interested in the M-TEC. Many schools use WorkKeys to assess the basic skills of students; in fact, over 2000 students were tested in 2001-02. If administered in a student's senior year, these WorkKeys scores are accepted as pre-assessment scores for students entering the M-TEC. Additionally, WorkKeys assessments are given to "dual

¹ Through funding provided by MDCD, all Michigan community colleges now have PLATO, which is an interactive software package comprised of assessment, alignment, instruction, and management tools. PLATO offers 2,000 hours of objective-based, problem-solving courseware from basic skills to advanced instruction. PLATO is aligned to several standards-based curricula and assessments; these include WorkKeys, the Michigan Educational Assessment Program (MEAP), and GED 2002. Some colleges or M-TECs with active WorkKeys Service Centers are beginning to use PLATO to help students improve their scores on WorkKeys assessments.

enrolled” students (those enrolled in both the high school and the M-TEC). All of this is facilitated by the fact that the M-TEC runs a WorkKeys Service Center and therefore is designated to provide testing and scoring services on-site.

Steps taken throughout the development of the M-TEC have created a culture that emphasizes assessment. The relatively small number of employees charged with the responsibility for program development made it both logistically and financially possible to initiate a comprehensive orientation program, one that included information on the principles of learning, how to design a competency-based, student-centered learning environment and most importantly, how to assess the extent to which students learn.

This total emersion into the world of assessment began with a two-day seminar on WorkKeys that was attended by the provost, the director of customized training and community services, and the chairperson for career and technical studies. Orientation of new M-TEC faculty and other employees also includes participation in a workshop on the World Instructional Design System (WIDS), a method of designing curricula that starts with the identification of competencies needed for the job and frequently uses WorkKeys job profiling for this purpose. Faculty in construction technology and manufacturing technology attended the WIDS workshop on Designing and Assessing Learning, accompanied by senior administrators and other M-TEC employees. (WIDS is described later in this document.)

Oakland Community College and its Technical Education Center (M-TEC) have used WorkKeys job/occupational profiles and assessments to support several of its programs.

- The Chrysler Manufacturing Technology Program, a partnership of the College with DaimlerChrysler and the Oakland Schools, trains manufacturing generalists. The college conducted an occupational profile for this position. Students are assessed against these benchmarks after completing their secondary school career-technical programs; they are assessed again at the end of the program to certify their skills. All graduates complete the program with entrance and exit tests in all WorkKeys areas (Reading for Information, Applied Mathematics, Observation, Teamwork, Locating Information, Writing, and Listening).
- The PC Users Support Program, a partnership of the M-TEC with 14 corporate sponsors, trains people to fill jobs as *help-desk technicians* and *technical support specialists*. The open entry – open exit program began in April 2002 and currently has 30 students enrolled. The program uses WorkKeys for curriculum development, screening applicants into the program, and certifying their skills at the end of the program. A Reading for Information level is used for program eligibility. Observation, Listening, and Locating Information are given at program completion. The skill levels were determined through an occupational profile that the M-TEC conducted with employees from the 14 companies. The center also offers WorkKeys

assessments in math and writing to students who wish to earn the Michigan Career Readiness Certificate as well.

- The M-TEC has conducted job profiles and assessments for approximately a dozen companies to help them with hiring and promotion decisions; 700-800 employees from these companies have been tested to determine their suitability for promotion and/or upgrading training.
- The M-TEC has worked with unions to screen candidates for apprenticeship programs in plumbing.
- It contributed free job profiles to Oakland County to document the WorkKeys skills required for police officers, firefighters, and emergency medical technicians.
- Other programs developed through WorkKeys profiles include Hospital Front Office staff and HVAC Technicians.

Entry/Exit Option for Adult Education Programs

MDCD authorizes several instruments to assess learning progress in the state's adult education programs, including four WorkKeys assessments – Reading for Information, Applied Mathematics, Locating Information, and Writing. The department requires that if the learner specifies a job-related goal (employment, retention, wage growth, etc.), the provider must use one or more of these WorkKeys assessments to determine learning progress. Thus far, almost 5,000 adult students have been assessed with WorkKeys.

Entry/Exit to *Fast Break*, a Work/College Readiness Program, and *Fast Break Futures*

Four WorkKeys assessments are used to assess the amount of basic skill learning that has occurred in *Operation Fast Break*, an intensive work/college readiness training program of 8-12 weeks for young adults that is an initiative of Michigan Governor John Engler. The assessments include Reading for Information, Applied Mathematics, Locating Information, and Teamwork. The reading and math assessments are given prior to program entry to help determine eligibility for the program. Applicants must score at least at a level three to gain entry. Those who do not meet this requirement may enroll in Step-Up, a pre-Fast Break program designed to bring up WorkKeys scores to the required levels. To successfully complete Fast Break, students must be assessed at a Level 4 or higher and improve by at least one level on all four assessments. As of August 2002, more than 500 students have enrolled in Operation Fast Break, with WorkKeys being used as the principal assessment tool.

Fast Break Futures is a similar model that adds training leading to the Microsoft Office Users System (MOUS) certification. The incorporation of this component as intensive occupational training makes *Fast Break Futures* eligible for Work First/Temporary

Assistance for Needy Families (TANF) funding. WorkKeys entry and exit requirements for *Fast Break* and *Fast Break Futures* are the same.

Entry/Exit Option for Workforce Development Programs

MDCD operates a number of workforce development programs for individuals seeking employment or better jobs through its system of 25 Workforce Development Boards and approximately 100 one-stop service centers. While MDCD policy does not require the use of WorkKeys for most of these programs, it does specify WorkKeys in two instances:

- A WorkKeys assessment is included as one of the program completion requirements for Fast Break Futures, a Condensed Vocational Training activity under Work First, the state's principal welfare reform program. Fast Break Futures is described above. The primary difference is that Fast Break Futures adds Microsoft Office Users Certification to the basic program. Fast Break Futures is just getting underway in Michigan, with the first class of 19 participants enrolled through the Macomb-St. Clair Michigan Works! agency.
- The Welfare Reform Field Visit Review Guide contains questions about local employers' acceptance of WorkKeys in lieu of a GED or high school diploma and steps the Michigan Works! Association is taking to persuade local employers to accept WorkKeys.

Although MDCD policy does not require the use of WorkKeys in most instances, 15 of the state's 25 Michigan Works! agencies (MWAs) are voluntarily using WorkKeys, many of them extensively. Most use WorkKeys to assess whether student learning criteria have been met by contractors operating the new performance-based Partnership for Adult Learning (PAL adult education) program. A few use WorkKeys to assess dislocated workers and other participants in programs supported by federal Workforce Investment Act (WIA) funds. As stated earlier, all MWAs that are responsible for Operation Fast Break and Fast Break Futures use WorkKeys to assess applicants and completers.

The success of Michigan's Career Development System, of course, relies on local initiative and innovation. For example:

- The Ottawa County Michigan Works! agency requires WorkKeys assessments for WIA clients prior to entering training programs and has purchased KeyTrain for their labs in order to help clients meet employment goals based on WorkKeys Occupational Profiles. The agency also stipulates the use of WorkKeys as the assessment tool for Partnership for Adult Learning (PAL) programs that it administers with funds from the Michigan Department of Career Development. Through the PAL program, Ottawa has issued 11 Michigan Career Readiness Certificates. Finally, in their mini-grant program to encourage the training of incumbent workers, Ottawa has recommended that employers who receive the grant use WorkKeys to assess and document the skills of their employees.

- The Career Alliance in Genesee and Shiawassee counties uses WorkKeys in all of the programs previously mentioned.
- The 10-county Northwest Michigan Council of Governments uses WorkKeys extensively in its adult education programs including PAL, and it is preparing to use WorkKeys for awarding the WorkKeys-based Michigan Career Readiness Certificate in many of its workforce programs.
- The eight-county Northeast Michigan Consortium's Educational Advisory Group is discussing how to use WorkKeys in its 17 school districts. It is developing a plan to educate school counselors, teachers, other personnel, and employers over the next few months to a year. Once on board, the area expects to utilize WorkKeys on a larger scale.

Entry/Exit Option for Rehabilitation Services Programs

The Michigan Career and Technical Institute (MCTI), a residential center in Plainwell that provides occupational training for individuals with disabilities, has developed WorkKeys occupational profiles for all 13 of its technical training programs. MCTI assesses all entering students to help them develop a career plan and select from among the training programs available. Students are encouraged to enter programs for which they have sufficient WorkKeys skills. When a student's test scores fall below what is needed for success in his or her chosen occupational field, MCTI provides instruction to improve the student's basic skills. Approximately 300 students per year are tested in Reading for Information, Applied Mathematics, and Locating Information. Staff say that the Locating Information assessment is a particularly good predictor of problem solving and critical thinking skills.

MCTI also runs its own Operation Fast Break program, which uses WorkKeys to assess progress in Applied Mathematics, Reading for Information, Locating Information, Locating Information, and Teamwork. Approximately 100 MCTI students per year take these four WorkKeys assessments when they enter and exit the program.

MCTI has also used the WorkKeys system with a job retention case in northern Michigan. A Michigan Rehabilitation Services (MRS) Business Services Representative identified an employer who was concerned that a valued employee with a physical disability was not able to perform some of the reasoning, math, and language requirements of a specific job. MCTI's ACT authorized Job Profiler profiled the job and established the WorkKeys skill levels for this position. An in-depth evaluation indicated a gap between the job requirements and the client's skill levels. The employer granted the employee some release time to upgrade his skills. The individual, who has been determined to have a learning disability, is now attending MCTI's intensive Reading Clinic to improve his language processing skills.

The WorkKeys system allowed MCTI to communicate the work requirements effectively to both the employer and the employee. With an accurate profile of the job and the

individual skills, the school was able to customize an intervention to improve job performance and thus help the client retain his job.

The Michigan Career Readiness Certificate

The Michigan Career Readiness Certificate (MCRC) is a portable credential that signifies to a potential employer that an individual has achieved acceptable levels in the foundation skills necessary for success in most of the jobs in the Michigan economy. Thus, certificate holders can distinguish themselves from the competition.

The Michigan Council on Technical Excellence, which is chaired by Lt. Governor Dick Posthumus, and whose members represent business, labor, and education, developed the Michigan Career Readiness Certificate based on the WorkKeys employability skills assessment system.

The MCRC is viewed as a great complement to the high school diploma and to the state's MEAP test, both of which assess academic proficiency. The WorkKeys skill levels that apply to the MCRC are:

- Applied Math (Level 4)
- Reading For Information (Level 5)
- Locating Information (Level 4)
- Writing (Level 3)

What the Skill Levels Mean

All WorkKeys tests are scored within a numerical range for each subject, which identifies varying levels of complexity.

Applied Math (range = 3 to 7). A person with *Level 4 skills* can:

- Add, subtract, multiply, and divide positive or negative numbers, including fractions, decimals, and percentages.
- Calculate averages, simple ratios, proportions, and rates.
- Read a simple chart or graph to obtain information to solve a problem.

Reading for Information (range = 3 to 7). A person with *Level 5 skills* can:

- Recognize the application of technical terms or jargon to stated situations.
- Identify the appropriate definition of a word with multiple meanings.
- Apply instructions to new situations.

Locating Information (range = 3 to 6). A person with *Level 4 skills* can:

- Summarize and/or compare information and trends in charts and graphs.

Writing (range = 1 to 5). A person with *Level 3 skills* can:

- Write clear messages, which may include incomplete sentences or minor errors in grammar and punctuation that do not compromise the message.

WorkKeys Option For Earning the Michigan Merit Award

The Michigan Merit Award is a \$2,500 college scholarship given to high school students who meet or exceed standards on four subjects of the Michigan Educational Assessment Program, known as the MEAP. The four subjects are reading, math, writing, and science. State law gives a second chance for those who passed at least two of the subjects. Those students can also win by scoring in the 75th percentile range on the ACT or SAT college entrance tests, or by scoring at a high level in four WorkKeys assessments. The WorkKeys levels were set to reflect the skills required for 75 percent of the jobs in the country:

- Math, Level 5
- Reading for Information, Level 5
- Locating Information, Level 4
- Writing, Level 3

Students who receive a Michigan Merit Award through MEAP and WorkKeys testing can use the \$2,500 award to enroll in an educational program at an approved postsecondary institution. Approved programs include virtually all programs at technical, occupational, or apprenticeship institutions, as well as programs such as engineering, science, and mathematics at traditional two-year or four-year institutions. In 2002, some 280 of the total of 45,800 award winners used the MEAP/WorkKeys option. It is anticipated that this number will increase as WorkKeys becomes better known among the state's school districts.

Financial Incentives For Improved WorkKeys Scores By Gear Up Participants

The mission of GEAR UP, a federal program carried out by states and local educational institutions, is to significantly increase the number of low-income students who are prepared to enter and succeed in postsecondary education. Several consortia of universities, community colleges, and school districts throughout Michigan have developed programs and activities for 6th to 12th grade students to achieve this goal.

The Michigan Department of Career Development (MDCD) is coordinating GEAR UP statewide and is using some of the funds as an incentive to encourage participating institutions to raise the skills of these students so that they will be able to earn the Michigan Merit Award, a scholarship to attend postsecondary education. The Michigan Merit Award recognizes academic excellence, as determined by performance on the MEAP or a combination of the MEAP and either the ACT/SAT or WorkKeys.

To assure that GEAR UP sites are maximizing efforts to encourage students to gain the Merit Award, MDCD is providing a performance incentive of \$8,000 to sites that demonstrate improvements on the MEAP and WorkKeys assessments. A site may earn only one \$8,000 award per year. For sites serving a multiple cohort, the award is based on the entire multiple cohort meeting the minimum requirements for each grade of the cohort. However, no award is available for 6th grade, which is considered a preparation year.

For the 7th grade, the award is based on an increase in the percentage of students in the GEAR UP cohort who achieve satisfactory status on the MEAP 7th grade reading test for that year over the immediately preceding year.

For the 8th grade, the award is based on an increase in the percentage of students in the GEAR UP cohort who achieve at the highest two of the four levels of the MEAP 8th grade math test for that year over the immediately preceding year.

For the 9th grade, and subsequent grades that fall within the five-year federal GEAR UP grant, sites must establish a baseline of student scores for each cohort in WorkKeys Applied Mathematics and Reading for Information tests, and document improvement for the cohort in subsequent grades.

The \$8,000 awards will be given to those sites where: in the first-year tests (9th grade), 85 percent of the students in the GEAR UP cohort score at a level 3 or higher in WorkKeys Applied Mathematics and Reading for Information. In subsequent grades, the GEAR UP cohort must show an increase in both WorkKeys tests over the preceding year for the site to receive the award.

Sites are encouraged to use their local WorkKeys Service Center for test administration. Costs associated with WorkKeys tests may be charged to the local grant.

Using WorkKeys To Build Curricula Aligned With Employer Needs

Once employer skill requirements are ascertained, educators can develop curricula to meet these requirements. MDCD has supported two initiatives to encourage educational institutions, particularly community colleges, to use WorkKeys to develop curricula that are aligned with employer needs. One is the Worldwide Instructional Design System (WIDS); the other is the Competency-Based Curriculum Grants program.

Worldwide Instructional Design System (WIDS)

WIDS provides tools for designing performance-based learning in all environments, disciplines, and delivery modes. Developed by frontline technical and community college teachers, with input from business and industry, WIDS provides experience and

leadership in the planning, coordination, facilitation, and development of curriculum at both the college and state levels.

The WIDS method of designing curricula starts with the identification of competencies needed for the job. There are two similar methods that may be used to identify these competencies – WorkKeys job profiling and DACUM (Developing a Curriculum). The WorkKeys task analysis uses background information, the DOT (Dictionary of Occupational Titles), SME's (subject-matter experts), criticality, site visits, etc., to come up with an initial list of tasks. This is presented to incumbent workers for verification. They spend between 25 percent and 33 percent of their time refining the task list or occupational skills. The rest is invested in determining the level of skill required (to perform the job tasks) for each of the eight WorkKeys areas (for example, Levels 3-7 in reading or math).

In DACUM, the task list is created from scratch using individuals who actively practice the jobs (SMEs), and the group spends 75 percent of its focus group time doing this. Follow-up surveys are conducted for verification, and further analysis leads to the development of performance standards for each task including the requisite academic skills and core abilities. This process is so similar to WorkKeys that it can be used to build the task list for a WorkKeys job profile.

DACUM frequently supplements the eight WorkKeys skill areas by specifying the technical skills and higher-order academic skills required to perform the job. The combination of WorkKeys with these other kinds of skills is referred to by MDCE as a full “competency analysis profile” (CAP).

Once WorkKeys and/or DACUM identify the work competencies, these are entered into the WIDS software. Then the software guides users through a process to develop a curriculum that will equip students with these skills. Competency-based curricula that are already available, such as PLATO instructional modules based on WorkKeys, can also be entered into the WIDS software.

Through workshops sponsored by MDCE and provided by WIDS staff, personnel from 25 of 28 Michigan community colleges have acquired WIDS licenses indicating they have learned how to use the WIDS model for developing competency-based curricula. WIDS training consists primarily of learning how to use the WIDS software program (database) for creation, revision, and management of curriculum elements, such as learning plans, syllabi, and performance assessment tasks.

Over a two-year period, several WIDS workshops trained nearly 300 community college staff, and almost 50 qualified as trainers in the WIDS method of designing competency-based curricula. Examples of colleges that are using WIDS and WorkKeys to develop curricula include the following:

- Kirtland Community College has developed 600 courses (modules) in WIDS for use in its new M-TEC (Technical Education Center) located in Gaylord. All courses are linked to WorkKeys skill levels.
- Mott Community College in Flint also uses the WIDS format and WorkKeys skill levels to develop all curricula for its new M-TEC.
- Muskegon Community College uses WIDS and WorkKeys to develop all of its distance learning modules.
- Glen Oaks Community College uses WIDS to develop all of its nursing curricula.
- Bay College used WIDS and WorkKeys to develop full competency analysis profiles for the wood industry for the “harvester” and “forwarder operator” positions. Trainee candidates participate in WorkKeys assessments as part of the screening process. Significant deficiencies on these assessments direct them to remediation training through KeyTrain, a training tool aligned with WorkKeys. Training completers are then re-assessed through WorkKeys to affirm their mastery of the competencies required for entry into these positions.

Competency-Based Curriculum Grants

Over a two-year period, MDCCD spent \$1.5 million on 11 Competency-Based Curriculum Development Grants to align training curricula with the skill requirements of employers for high-demand occupations within particular labor market areas. The grants help ensure that curricula keep pace with new skill requirements that result from the incorporation of new technologies and marketing opportunities into business and industry. Institutions receiving these grants used WorkKeys as part of the Competency Analysis Profiles for the high-skill occupations for which the training curricula were established. Examples of curricula developed with these grants include the following:

- Oakland Community College designed a PC user support technician and operating systems technician certificate program to be offered through the college’s Michigan Technical Education Center (M-TEC).
- Capital Area Workforce Development Consortium (several education and business partners), Oakland Schools, and Kalamazoo Valley Community College updated their respective curricula for advanced manufacturing and simulation technology,
- Saginaw City Schools (Saginaw Career Complex) developed a curriculum for chemical processing technology.
- St. Clair County Community College developed a curriculum for learning to operate a gas chromatographer.

- Delta College is developing curricula for three occupations: Network Management/Systems, Computer Systems Technician/Equipment Repair/Maintenance, and IT Software Applications.
- Alpena Community College is partnering with the Besser Company to develop curricula for industrial maintenance technicians/supervisors.
- Glen Oaks Community College, St. Joseph County Intermediate School District, and three health care business partners developed a competency-based curriculum leading to a Medical Assistant Certificate.
- The M-TEC at Kalamazoo Valley Community College, in partnership with Kalamazoo Regional Education Service Agency, developed a competency-based curriculum for operations mechanics working in a regulated (and often aseptic or sterile) manufacturing environment. Business partners include Pharmacia Corp., Perrigo Co., and Minute Maid, Inc.
- The M-TEC at Bay DeNoc College, in partnership with Delta-Schoolcraft and Dickinson-Iron intermediate school districts and three logging companies, developed a competency-based Cut-To-Length Harvesting: New Operator Training Program.

More up-to-date curricula strongly linked to employer requirements will produce a workforce that will help Michigan businesses succeed in an increasingly competitive, global economy. WorkKeys provides a common language to identify the generic work skills within and between industries.

Recent Initiatives and Future Directions

MDCD continues to explore ways to strengthen the career development system through the incorporation of WorkKeys into additional facets of the career development system. This section describes how the Michigan Department of Education intends to use WorkKeys to certify the basic skills competence of paraprofessionals who assist teachers in the classroom. It also describes MDCD's partnership with the Michigan Manufacturers Association and ACT to use WorkKeys to help assess the extent of the skills gap among Michigan's manufacturing workers. Finally, the section describes MDCD's intent to include WorkKeys levels in various tools it has developed to improve career guidance and awareness.

Michigan Department Of Education Adopts WorkKeys To Assess Paraprofessionals

Under the *No Child Left Behind* (NCLB) federal legislation, beginning this school year (2002-03), every school in America must hire only "highly qualified" teachers and paraprofessionals. Fully certified teachers in Michigan have always had to pass a basic skills test and content appropriate assessments for their areas of expertise. However,

under the new NCLB, Michigan's paraprofessionals must also demonstrate that they are highly qualified by:

- (1) Completing at least two years of postsecondary study;
- (2) Obtain an associate's degree or higher; or
- (3) Meet a rigorous standard of quality and can demonstrate, through a formal state or local academic assessment:
 - (A) knowledge of, and the ability to assist in instructing, reading, writing, and mathematics; or
 - (B) knowledge of, and the ability to assist in instructing, reading readiness, writing readiness, and mathematics readiness, as appropriate.

To comply with the new law, the Michigan Department of Education recently decided to recommend WorkKeys as the assessment of choice for paraprofessionals to demonstrate basic skills. As of this writing, it was still undetermined which WorkKeys assessments will be used to measure the competencies of Michigan's paraprofessionals, or whether a new or existing WorkKeys profile would be adopted to benchmark paraprofessionals' skill levels. In the 2001-02 school year there were 25,497 paraprofessionals working in Michigan classrooms.

Foundation Skills For Michigan's Manufacturing Workforce

A national survey by the National Association of Manufacturers indicated serious shortages of qualified manufacturing workers, particularly among skilled hourly-level workers. Among this group, the top deficiency noted for both incumbent workers and applicants is a lack of basic employability skills. This lack of skilled workers negatively impacts the ability to maintain production levels or to improve productivity through the deployment of technological innovation.

To address this issue in Michigan, the Michigan Department of Career Development, Michigan Manufacturers Association, and ACT have partnered to identify the foundational skills for Michigan's manufacturing workforce. Once WorkKeys skill profiles are identified for each of six broad manufacturing job clusters, 1,200 front-line workers will be assessed against the profiles to determine the extent and nature of the skills gap for each of the six clusters. With the skills gap defined, companies and educational organizations can develop training programs to close the gap.

ACT will base its work on the six Manufacturing Job Clusters determined by the Manufacturing Skill Standards Council (MSSC), part of a larger effort by the National Skill Standards Board. These clusters are: (1) Production; (2) Manufacturing Production Process Development; (3) Quality Assurance; (4) Health, Safety, and Environmental Assurance; (5) Maintenance, Installation, and Repair; and (6) Logistics and Inventory Control.

Using these clusters and ACT's WorkKeys program, ACT staff has developed a WorkKeys skill profile for each cluster. The Michigan Manufacturers Association (MMA) has asked its members to determine if these profiles "fit" the Michigan

manufacturing environment, and, if not, what changes need to be made. MMA will conduct one meeting for each of the six clusters to tailor the profile to manufacturing jobs in Michigan. Companies will select the cluster meeting in which they are most interested.

After these meetings to determine the appropriateness of the WorkKeys Skill Profile, the interested companies will administer the appropriate WorkKeys assessments to a sample of their employees. The resulting employee skill profiles will be compared to the position profiles in order to determine whether there is a skills gap and, if so, how large it is.

The success of this project will lead to the availability of a more highly skilled workforce in Michigan. By matching skills needed with skills possessed and providing targeted training programs to close skill gaps it is our hope that Michigan manufacturers will realize increased production, decreased scrap expenses, minimal employee turnover and, through all of these, increased profitability.

Including WorkKeys Levels In Career Guidance/Awareness Tools

In 2001 MDCD in collaboration with the Michigan Virtual University created the TalentFreeway (www.talentfreeway.org) to provide a one-stop, user-friendly online service for Michigan residents. This site helps users connect with employment matching opportunities, career planning, skills assessment, education, and training options. TalentFreeway includes access to *MyDreamExplorer* – a site-licensed program with comprehensive career development for middle and high school students.

To improve this multi-faceted, Web-based career guidance system, MDCD is exploring how to include the WorkKeys levels required for success in different occupations. Thus, students engaged in career exploration would be able to learn the skills needed for success in their favorite fields, and job-seekers would be able to learn the skill requirements of employers with job profiles for their vacant positions.

There are several issues to resolve to incorporate this kind of information in a Web-based system. One is to determine cost-efficient ways of entering, updating, verifying, and, if necessary, regionalizing the WorkKeys data connected with job descriptions. Another is that TalentFreeway and its career guidance components are moving toward the U.S. Department of Labor's O-NET system for classifying jobs, whereas WorkKeys job profiles are still based on the dated Dictionary of Occupational Titles (D.O.T.). ACT is in the process of converting their job profile software to the O-NET classification system.

Conclusion

WorkKeys provides the means for employers, educators, jobseekers, and students to communicate precisely with one another on the skill requirements of careers and jobs. Such clarity will improve student and worker preparedness, provide for on-target

instruction, and greatly enhance the hiring process for employers. On this basis, Michigan has implemented WorkKeys on a broad scale. State initiatives include:

- Established infrastructure statewide to support job profiling, test administration, and test scoring.
- Launched a general credentialing system based on WorkKeys to certify “career readiness.”
- Established policies to encourage or require use of the WorkKeys assessments to certify career readiness through various workforce and career preparation programs administered by the Michigan Department of Career Development;
- Used funding incentives to develop technical education curricula that incorporate the skill requirements identified by occupational and job profiles.
- Offers the WorkKeys assessment as an alternative to qualify for the \$2,500 Michigan Merit Award scholarship.
- Uses WorkKeys assessment scores and job profiles to gauge the state’s skills gap
- Announced plans to certify the basic skills competence of paraprofessionals assisting classroom teachers in K-12 education.
- Formed a partnership with ACT and the Michigan Manufacturers Association to identify the foundational skills for the state’s manufacturing workforce.
- Began work to incorporate information on the WorkKeys-based skill requirements into career guidance and career information tools for widespread dissemination.

Thus, WorkKeys has been embedded throughout Michigan’s Career Development System and will continue to play an important role in its improvement.